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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
GRASER, JENNIFER E	
ART UNIT	PAPER NUMBER
1645	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/09/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/687,892	O'DALY, JOSE A.	
	Examiner	Art Unit	
	Jennifer E. Graser	1645	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 January 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *55-89* is/are pending in the application.

4a) Of the above claim(s) *72-89* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *55-71* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group I, claims 55-71, in the reply filed on 1/22/07 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement between the composition claims and the method claims, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claims 72-89 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention.

Specification

2. The disclosure is objected to because of the following informalities: on page 1, line 1, the continuing data information fails to recite the numerical patent number following the words "U.S. Patent No. ".

Appropriate correction is required.

Sequence Compliance

3. The instant specification also contains several nucleotide/amino acid sequences throughout the specification which are encompassed by the definitions for nucleotide/amino acid sequences as set forth in 37 C.F.R. 1.821(a)(1) and (a)(2) and which must conform with the sequence rules for all applications that include nucleotide/amino acid sequences. However, this application fails to comply with the requirements of 37 C.F.R. 1.821-25. The sequence identifiers obtained through conformance (paper submission and CRF/electronic) must be inserted into the body of the specification directly following the sequence. See Table 18 on pages 39-40 which fails to recite the corresponding sequence identification numbers. Additionally, Applicants are responsible for meeting compliance with any sequence the Examiner may have inadvertently missed. If compliance of the sequences set forth in Table 18 and elsewhere have already been met, then Applicant merely needs to amend the specification to insert the corresponding sequence identifiers which were obtained through conformace.

APPLICANT MUST COMPLY WITH THE SEQUENCE RULES WITHIN THE SAME TIME PERIOD AS IS GIVEN FOR RESPONSE TO THIS ACTION, 37 C.F.R. 1.821-25. Failure to comply with these requirements will result in ABANDONMENT of the application under 37 C.F.R. 1.821(g). Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 C.F.R. 1.136. In no case may an applicant extend the period for response beyond the six month statutory period. Direct the response to the undersigned.

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 55-71 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-18 of U.S. Patent No. 6,673,351. Although the conflicting claims are not identical, they are not patentably distinct from each other because the wording of the claims differs, but the products being claimed are essentially the same protein extracts comprising polypeptides having apparent molecular weights after total reduction and alkylation of 73, 80 and 82 kDa. The

products claimed in the patent are not patentably distinct as that which is instantly claimed as the scope of the invention is the same. Additionally, patented claim 16 recites that the 73kDa polypeptide comprises the amino acid sequences set froth in SEQ ID NO: 11, 12, 13 and 14 which is the same as instant claim 62. Patented claim number 16 recites that the 80kDa polypeptide comprises the amino acid sequences set forth in SEQ ID Nos: 1, 3 and 10 which is the same as instant claim 65. Patented claim 16 recites that the 82kDa polypeptide comprises the amino acid sequence set forth in SEQ ID Nos: 7, 8 and 9 which is the same as instant claim 68. The Genus set forth in instant claim 55 encompasses the patented claims. The intended use recited in both sets of claims does not result in a structural difference between the claimed invention and the patented invention. The instant claim's structure is capable of performing the intended use of the patented claims since it is structurally the same protein extract.

Claim Rejections - 35 USC § 112-2nd paragraph

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 55-71 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 55 is vague and indefinite because it is unclear what is encompassed by the term 'particulate antigen'. The specification teaches that the antigen is a purified protein extract from isolated killed cells of amastigotes from at least one speices of the Leishmania genus, e.g., protein fractions 3 & 4. The term 'particulate antigen' is vague

and confusing and does not adequately convey the product. The instant claims recite that the antigen is isolated from Leishmania protozoa yet the specification teaches that the extract comprising polypeptides of this molecular weight are specifically isolated from amastigotes. The claim, as written, fails to adequately describe and identify the product without ambiguity. The molecular weights of the components in the mixture which may come from any protozoa of genus Leishmania to describe the invention is not sufficient to satisfy the Statute's requirement of adequately describing and setting forth the inventive concept. The claim should provide any structural properties, such as the amino acid sequence of the polypeptides and/or the exact method used to isolate the extract, which would allow for one to identify the composition without ambiguity. Since the components of fractions 3 and 4 are not clearly set forth, the method used to obtain them is necessary in order to establish the bounds of patent protection. It does not appear that any extract or particulate antigen comprising polypeptides with molecular weights similar or identical to those recited in instant claim 55, rather it was the method of obtaining the fractions which resulted in an extract with the specific immunotherapeutic properties.

Claims 57 and 58 are vague and indefinite due to the parentheticals, e.g., (V), (L) and the misspelling 'basiliensis'. The claims should be amended to recite *Leishmania amazonensis, Leishmania venezuelensis, Leishmania brasiliensis* and *Leishmania chagasi*', respectively.

Claims 59-70 are vague and indefinite because it is unclear what is encompassed by the term "immunogenic variants". What is encompassed by an

immunogenic variant, e.g., raises a different immune response, possesses a different structure and retains the same immune response, insertions, deletions, substitutions, etc.? The metes and bounds of the language cannot be understood. Clarification and correction is requested. See also enablement and written description rejections below.

Claims 59-70 are vague and indefinite because it is unclear which sequence identification numbers correspond to which molecular weight, e.g., is the 73 kDA polypeptide set forth in SEQ ID Nos: 12, 13, 14 or something else. Additionally, it is unclear how SEQ ID NO:1 can be the amino acid sequence for the 73kDa, 82kDa and 80kDA polypeptide simultaneously (as described in the instant specification and recited in claims 63, 64, 65, 69 and 70). This is vague and confusing. How can SEQ ID NO:1 encode 3 different polypeptides with different molecular weights?

Claim Rejections - 35 USC § 112-Enablement

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claims 55-71 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for "a composition capable of eliciting an immune response to result in abatement of the clinical symptoms of psoriasis, said composition comprising a purified protein extract wherein said purified protein extract is isolated by diethylaminoethyl Sepahadex chromatography of a Nonidet P-40 isnsoluble particulate antigen fraction obtained from isolated killed cells of amastiogotes form at least one species of the Leishmania genus, said particulate antigen fraction solubilized with 8 M

urea and 0.025 M Tris[hydroxymethyl]aminomethane pH 8.3 applied to diethylaminoethyl Sephadex and eluted with a solution comprising 0.1 M. sodium chloride, 8 M urea and 0.025 M. Tris[hydroxymethyl]aminomethane pH 8.3, said purified protein extract consisting of polypeptides having apparent molecular weights after total reduction and alkylation of 73, 80 and 82 kDa", does not reasonably provide enablement for "a composition for treatment of symptoms of psoriasis comprising *any* particulate antigen isolated from protozoa of genus Leishmania, wherein the particulate antigen comprises polypeptides having apparent molecular weights after total reduction and alkylation of 73 kDa, 80 kDa, and 82 kDa". The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims.

Enablement requires that the specification teach those in the art to make and use the invention without undue experimentation. Factors to be considered in determining whether a disclosure would require undue experimentation include (1) the nature of the invention, (2) the state of the prior art, (3) the predictability or lack thereof in the art, (4) the amount of direction or guidance present, (5) the presence or absence of working examples, (6) the quantity of experimentation necessary, (7) the relative skill of those in the art, and (8) the breadth of the claims.

The instant claims are broadly drawn to a composition for treatment of symptoms of psoriasis comprising *any* particulate antigen isolated from protozoa of genus Leishmania, wherein the particulate antigen comprises polypeptides having apparent molecular weights after total reduction and alkylation of 73 kDa, 80 kDa, and 82 kDa.

However, the instant specification only teaches the production of one composition which contains polypeptides with those molecular weight. The specification teaches that this extract isolated by diethylaminoethyl Sepahadex chromatography of a Nonidet P-40 isnsoluble particulate antigen fraction obtained **from isolated killed cells of amastiogotes** form at least one species of the Leishmania genus, said particulate antigen fraction solubilized with 8 M urea and 0.025 M Tris[hydroxymethyl]aminomethane pH 8.3 applied to diethylaminoethyl Sephadex and eluted with a solution comprising 0.1 M. sodium chloride, 8 M urea and 0.025 M. Tris[hydroxymethyl]aminomethane pH 8.3, said purified protein extract consisting of polypeptides having apparent molecular weights after total reduction and alkylation of 73, 80 and 82 kDa. It is unpredictable that another extract could be produced which contained these polypeptides by a different method. The instant specification teaches three "generations' of immunotherapeutic agents all which comprise different polypeptide profiles. Example 2 on page 16 of the instant specification teaches that the immunogen preparations of the second-generation immunotherapeutic agent, contain protein fractions 3 and 4 obtained afer DEAE-chromatography and total reduction and alkylation, and had three bands with molecular weights of 73, 80 and 82 kDa, e.g, the compostion which is instantly claimed. It is taught on page 36 that immunotherapeutic agents comprising protein fractions 3 and 4, resulted in significant stimulation of lymphocytes which resulted in inhibition of the inflammatory response in psoriatic patients, thus inducing clinical remission of the psoriatic lesions. Example 16 provides further results of the fraction comprising the 73, 80 and 82kDa antigens obtained by the

method as set forth in the 'enabled' portion of the scope of enablement rejection above. The specification fails to teach any other fractions, extracts or particulate antigens which would work in a similar manner as proteins fractions 3 and 4. Since the components of fractions 3 and 4 are not clearly set forth, the method used to obtain them is necessary in order to establish the bounds of patent protection. It does not appear that any extract or particulate antigen comprising polypeptides with molecular weights similar or identical to those recited in instant claim 55, rather it was the method of obtaining the fractions which resulted in an extract with the specific immunotherapeutic properties. The claims should be limited accordingly. Genentech Inc. v. Novo Nordisk A/S (CAFC) 42 USPQ2d 1001 clearly states: "Patent protection is granted in return for an enabling disclosure of an invention, not for vague intimations of general ideas that may or may not be workable. See Brenner v. Manson, 383 U.S. 519, 536, 148 USPQ 689, 696 (1966) (stating, in context of the utility requirement, that "a patent is not a hunting license. It is not a reward for the search, but compensation for its successful conclusion.") Tossing out the mere germ of an idea does not constitute enabling disclosure. While every aspect of a generic claim certainly need not have been carried out by an inventor, or exemplified in the specification, reasonable detail must be provided in order to enable members of the public to understand and carry out the invention."

Additionally, the instant specification fails to teach immunogenic variants of SEQ ID Nos: 1-14. The breadth of the instant claims is drawn to polypeptides that are not specified in the sequence disclosure. The specification states that substitutions,

additions, or deletions may be made to the defined sequences; however, the specification provides no guidance as to what amino acids may be changed without causing a detrimental effect to the polypeptide/protein to be produced. Further, it is unpredictable as to which amino acids could be removed and which could be added. While it is known that many amino acid substitutions are possible in any given protein, the position within the protein's sequence where amino acid substitutions can be made with a reasonable expectation of success are limited. Other positions are critical to the protein's structure/function relationship, e.g., such as various positions or regions directly involved in binding, catalysis in providing the correct three-dimensional spatial orientation of binding and catalytic sites. These regions can tolerate only very little or no substitutions. Selective point mutation to one key residue could eliminate the function of the polypeptide. If the range of decreased binding ability after single point mutation of a protein antigen varies, one could expect point mutations in the protein antigen to cause varying degrees of loss of protection/function, depending on the relative importance to the binding interaction of the altered residue. Alternatively, the combined effects of multiple changes in an antigenic determinant could again result in loss of function. A protein having multiple antigenic sites, multiple point mutations, or accumulated point mutations at key residues could create a new antigen that is precipitously or progressively unrecognizable by any of the antibodies in the polyclonal pool. Applicants have provided no guidance to enable one of ordinary skill in the art how to determine, without undue experimentation, the effects of different amino acid substitutions and the nature and extent of the changes that can be made. It is

expensive and time consuming to make amino acid substitutions at more than one position, in a particular region of the protein, in view of the many fold possibilities for change in structure and the uncertainty as to what utility will be possessed. See Mikayama et al. (Nov.1993. Proc.Natl.Acad.Sci. USA, vol. 90 : 10056-10060) which teaches that the three-dimensional structure of molecules is important for their biological function and even a single amino acid difference may account for markedly different biological activities. Rudinger et al. (June 1976. Peptide Hormones. Biol.Council. pages 5-7) also teaches that amino acids owe their 'significance' to their inclusion in a pattern which is directly involved in recognition by, and binding to, the receptor and the significance of the particular amino acids and sequences for different amino acids cannot be predicted *a priori*, but must be determined from case to case by painstaking experimental study. Given the lack of guidance contained in the specification regarding acceptable amino acid substitutions, additions or deletions in the immunogenic variants, one of skill in the art could not make or use the broadly claimed invention without undue experimentation.

Claim Rejections - 35 USC § 112-Written Description

10. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

11. Claims 55-71 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to

one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The written description in this case only sets forth "a composition capable of eliciting an immune response to result in abatement of the clinical symptoms of psoriasis, said composition comprising a purified protein extract wherein said purified protein extract is isolated by diethylaminoethyl Sepahadex chromatography of a Nonidet P-40 isnsoluble particulate antigen fraction obtained from isolated killed cells of amastiogotes form at least one species of the Leishmania genus, said particulate antigen fraction solubilized with 8 M urea and 0.025 M Tris[hydroxymethyl]aminomethane pH 8.3 applied to diethylaminoethyl Sephadex and eluted with a solution comprising 0.1 M. sodium chloride, 8 M urea and 0.025 M. Tris[hydroxymethyl]aminomethane pH 8.3, said purified protein extract consisting of polypeptides having apparent molecular weights after total reduction and alkylation of 73, 80 and 82 kDa", and therefore the written description is not commensurate in scope with the claimed invention. Additionally, the instant specification fails to describe any immunogenic variants of the amino acid sequences set forth in SEQ ID Nos: 1-14.

Vas-Cath Inc. V. Mahurkar, 19 USPQ2d 1111, clearly states that "applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention. The invention is, for purposes of the 'written description' inquiry, whatever is now claimed." (See page 1117). The specification does not "clearly allow persons of ordinary skill in the art to recognize that [he or she] invented what is claimed." (See Vas-Cath at page 1116).

Applicant is reminded that Vas-Cath makes clear that the written description provision of 35 USC 112 is severable from its enablement provision (see page 115).

Reiger et al (Glossary of Genetics and Cytogenetics, Classical and Molecular, 4th Ed., Springer-Verlay, Berlin, 1976) clearly define alleles as one of two or more alternative forms of a gene occupying the same locus on a particular chromosome..... and differing from other alleles of that locus at one or more mutational sites (page 17). Thus, the structure of naturally occurring allelic sequences are not defined. With the exception of a composition capable of eliciting an immune response to result in abatement of the clinical symptoms of psoriasis, said composition comprising a purified protein extract wherein said purified protein extract is isolated by diethylaminoethyl Sepahadex chromatography of a Nonidet P-40 isnsoluble particulate antigen fraction obtained from isolated killed cells of amastiogotes form at least one species of the Leishmania genus, said particulate antigen fraction solubilized with 8 M urea and 0.025 M Tris[hydroxymethyl]aminomethane pH 8.3 applied to diethylaminoethyl Sephadex and eluted with a solution comprising 0.1 M. sodium chloride, 8 M urea and 0.025 M. Tris[hydroxymethyl]aminomethane pH 8.3, said purified protein extract consisting of polypeptides having apparent molecular weights after total reduction and alkylation of 73, 80 and 82 kDa" and the sequences set forth in SEQ ID Nos: 1-14, the skilled artisan cannot envision the detailed structure of the encompassed extracts and therefore conception is not achieved until reduction to practice has occurred, regardless of the complexity or simplicity of the method of isolation. Adequate written description requires more than a mere statement that it is part of the invention and a reference to a

potential method of isolating it. The product itself is required. See Fiers v. Revel, 25 USPQ 2d 1601 at 1606 (CAFC 1993) and Amgen Inc. V. Chugai Pharmaceutical Co. Lts., 18 USPQ2d 1016.

Furthermore, In The Reagents of the University of California v. Eli Lilly (43 USPQ2d 1398-1412), the court held that a generic statement which defines a genus of nucleic acids by only their functional activity does not provide an adequate written description of the genus. The court indicated that while Applicants are not required to disclose every species encompassed by a genus, the description of a genus is achieved by the recitation of a representative number of DNA molecules, usually defined by a nucleotide sequence, falling within the scope of the claimed genus. At section B(1), the court states that "An adequate written description of a DNA...'requires a precise definition, such as by structure, formula, chemical name, or physical properties', not a mere wish or plan for obtaining the claimed chemical invention".

No disclosure, beyond the mere mention of immunogenic variants is made in the specification. This is insufficient to support the generic claims as provided by the Interim Written Description Guidelines published in the June 15, 1998 Federal Register at Volume 63, Number 114, pages 32639-32645.

Therefore, the full breadth of the claims meets the written description provisions of 35 USC 112, first paragraph.

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

13. Claims 55-71 are rejected under 35 U.S.C. 102(b) as being anticipated by O'Daly et al (Gac Med Caracas, 103(2): 133-177, 1995).

O'Daly et al teach a preparation of a vaccine from Leishmania parasite strains, *L.amazonenis, L.venezuelensis, L.brasiliensis, and L.chagasi.* Each parasite was cultivated and was incubated at the particular temperature of transformation into the amastigote form. Once the parasite reached the amastigote stage they were subjected to a medium with an agent effective to kill the parasites. The parasites were harvested by centrifugation and washed. The isolated parasites were treated by incubation with a medium comprising a detergent, which extracts some proteins from the parasite. The proteins in the total extract were further fractionated and purified by centrifugation. Washing repeatedly further refined the centrifugation pellet comprising fractionated particulate isolated proteins; and, the supernatant fraction containing other *Leishmania* proteins was not further used. This centrifugation step is seen as fractionating and purifying the particulate proteins from the detergent extracted proteins and is fact purifying the particulate protein fraction from that solubilized by the detergent medium. The purified/fractionated particulate proteins from the detergent extract were resuspended in medium and then sonicated. The protein content of the extracted sonicate was determined and alumina was added at a concentration of 1mL/mg of

protein of each one of the *Leishmania* parasite strains, which were added in equal parts to obtain a final concentration of 1000ug/ml of *Leishmania* antigen. See page 1 of the translation of the article, under "Preparation of vaccine". The process of preparing the *Leishmania* vaccine extract according to O'Daly is substantially the same as that provided for in the specification at pages 3-4 and pages 11-12. Therefore, the composition of a purified protein extract comprising isolated polypeptides that is used in the claimed method appears to be the same as the compositions of the prior art. The proteins contained therein are in fact extracted/isolated/purified from the total amastigote form of the parasite to the same extent as provided for in the extracts of the specification. The recitation of the partial sequences from the *Leishmania* polypeptides found in the composition of the prior art is merely further characterization of the polypeptides of the prior art composition.

Although O'Daly does not specifically recite the amino acid sequences of their claimed polypeptides, the sequences are an inherent property of the composition of the prior art, especially given the identity of the source and the method in which the extracts were obtained. The disclosed extracts of the prior art reference appear to be identical to Applicants' claimed extract. Since the Patent Office does not have the facilities for examining and comparing Applicant's extract/particulate antigen with the extract of the prior art, the burden of proof is upon applicants to show an unobvious distinction between the material structural and functional characteristics of the claimed antigen and the extract of the prior art. See In re Best, 195 USPQ 430, 433 (CCPA 19&&). The phrase "for treatment of symptoms of psoriasis" is an intended use only. A recitation of

the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

14. Claims 55-71 are rejected under 35 U.S.C. 102(e) as being anticipated by Lesmare (US Patent No. 6,458,581 B1).

Lesmare teaches polypeptide extracts of short-term promastigote forms and total polypeptide extracts of amastigote forms at different stages of their growth in vitro. See column 7. The reference teaches that the extracts can be obtained from any species of Leishmania, and expressly mentions L.braziliensis, L.amazonensis, and L.chagasi. See column 6, lines 45-50. Gel electorphoresis revealed numerous polypeptides with molecular weights ranging from about 60-85 kDa. Column 34, line 44, teaches a 70Kda polypeptide from L.infantum, column 27 teaches an L.amazonensis polypeptide extract comprising an ~80kDa polypeptide, column 25 teches an ~ 85 kDa protein from L.donovani, 90kDa polypeptides are taught. The reference teaches these polypeptides are comprised in a total polypeptide extract. The instant claims use the open language 'comprising' and allow for the inclusion of additional polypeptides. Addtionally, although Lesmare does not specifically recite the amino acid sequences of their claimed polypeptides, they would inherently be that of any one of SEQ ID Nos: 1-14, given the identity of the source and the method in which the extracts were obtained, the disclosed extracts of the prior art reference appear to be identical to Applicants' claimed extract. Since the Patent Office does not have the facilities for examining and comparing

Applicant's extract/particulate antigen with the extract of the prior art, the burden of proof is upon applicants to show an unobvious distinction between the material structural and functional characteristics of the claimed antigen and the extract of the prior art. See In re Best, 195 USPQ 430, 433 (CCPA 19&&). The phrase "for treatment of symptoms of psoriasis" is an intended use only. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

15. Correspondence regarding this application should be directed to Group Art Unit 1645. Papers related to this application may be submitted to Group 1600 by facsimile transmission. Papers should be faxed to Group 1600 via the PTO Fax Center located in Remsen. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15,1989). The Group 1645 Fax number is 571-273-8300 which is able to receive transmissions 24 hours/day, 7 days/week.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer E. Graser whose telephone number is (571) 272-0858. The examiner can normally be reached on Monday-Thursday from 7:30 AM-6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Siew, can be reached on (571) 272-0787.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (571) 272-0500.

J Graser

Jennifer Graser
Primary Examiner
Art Unit 1645

3/30/07